Appendix C

PIM side for the xSides bar

Rev. 10

(Personal Information Manager)

Product Specification

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1 Functional Specification

1.1 Overview

This project is designed to convert the calendar and other appropriate features/tools from the MySpace OnlineApartment; plus new tools, into an extended (portal) side for the xSides bar. These features/tools fall under the category of Personal Information Management. The title of the actual side is still up in the air at this point.

1.2 Implementation Schedule

Phase 1 – done/changed

PIM bar only (no portal) –

Phase 2 - done

Phase 2 provides for a PIM bar with Calendar, Contacts and To Do list only utilizing the portal area, (ie. Partial functionality for the portal area).

Phase 3

PIM bar with full functionality plus,

Make the following revisions to the current calendar:

- Add wedding and anniversary icons to the calendar.
- Add ability to schedule repeating events on specific dates, for ex., the 1st of every month and one day per year, on a specific date (birthdays and anniversaries, etc.) Events like birthdays and anniversaries could just auto-repeat. (add to pull down menu?)
- Change events that recur every other week to start on the first week they are scheduled.
- Enable non-time-specific events to appear in the cream box, maybe with a different colored background. (part of a later phase)
- Make Help window resizable.

Phase 4, ?

Expand the Daily News button into an individual,face for the PIM. The user would roll to this other face. (not currently outlined in this spec., not currently decided upon.) Replace Daily News button with: Expense Report button or Web-based Word Processor button.

Phase 5, ?

Make the calendar able to used offline (without an Internet connection).

1.3 End User Requirements

1.4 Hardware

1.4.1.1 Client Side

- Internet access and provider
- Min Processor: 486DX/66 PC (Pentium® or higher recommended)
- 3MB of free hard drive space
- 20MB of RAM; (24MB of RAM recommended for Win95)
- 24 MB of RAM (32 MB recommended) for Win98
- Monitor: VGA (with standard resolutions)
- Mouse and Keyboard support.
- Recommended for single-monitor systems
- Direct X Support (installer will install if needed)
- Modem

1.4.1.2 Server Side

- WWW server
- SQL database server

1.4.2 Software

1.4.2.1 Server Side

- Database(s) to support the calendar, Distributor and Instant Alert.
- SQL 6.5 or 7.0
- IIS 4.0+
- User Registration

1.4.2.2 Client Side

- Windows 95 or 98 or Windows NT Operating System
- Install detects whether client system needs to have additional support software installed.

1.5 End User Features in general:

The user will download a single xSides side that is the PIM or will download a prepack that includes the PIM. By enabling users to store and access personal information, it is hoped that the PIM side will increase stickiness for the xSides bar.

Users will be able to access their own personal address book through this side as well as maintain their own personal calendar. With the use of Instant Alert, they can, if they wish, be notified in advance of events listed on their personal calendar either through email or a desktop pop-up instant alert window. They will also be able to access a calculator; a portal for writing and finding memos – notes the user generates about any topic; links to headlines from our Daily News, the magazine rack from MySpace Online; and an Export/Import feature, which will allow for the exchange of information as it relates to the Address book, calendar, To-Do list, and Memo features.

1.6 Deliverables

1.6.1 Client Side

1.6.2 Server Side

1.6.3 Installer

2 UI Analysis

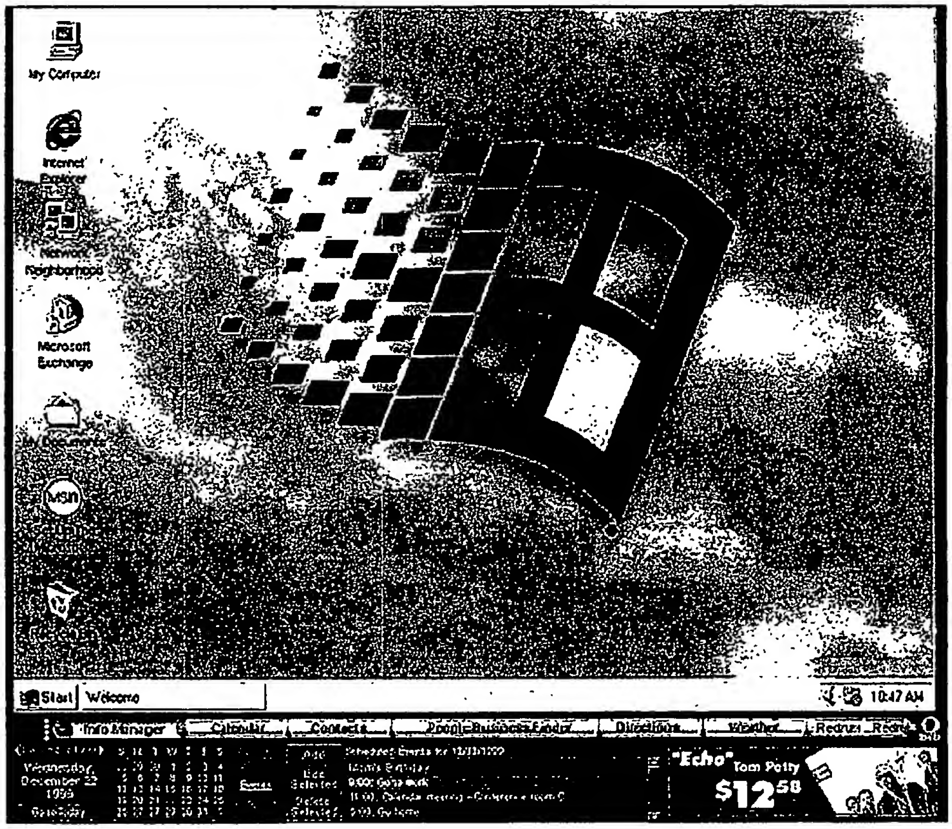
2.1 PIM side for xSides Bar: (from left to right)

2.1.1 PIM/Info Manager side buttons:

The category title area on the left-hand side of the side will contain the title: "PIM" or "Info Manager" or another name to be specified. The Info Manager side includes the following buttons from left to right: Calendar, Contacts, Calculator, Memo, Daily News, Newsstand, and Import/Export. If a user clicks on a button, it causes the associated portal to appear in the portal area beneath the bar.

2.1.2 Calendar button:

The first button to the right of the category title area will be labeled "Calendar". When the user clicks on the Calendar button the following information will appear from left to right, in the extended portal area below the bar:



Calendar Portal showing the Scheduled Events list.

2.1.2.1 Current Date.

The current date is displayed on the left side of the Calendar portal area.

2.1.2.2 Go To Today:

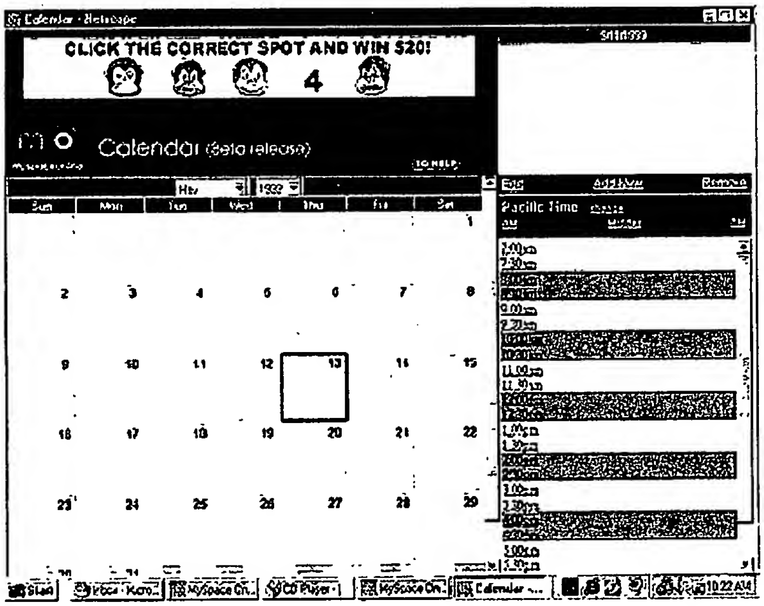
Clicking on the Go To Today button on the Calendar portal causes the current day's date to highlight on the monthly calendar and presents the current days scheduled events in the portal area to the right.

2.1.2.3 Monthly calendar:

A small current monthly calendar, with the current date highlighted appears to the right of the current date.

2.1.2.4 Full-Size Calendar:

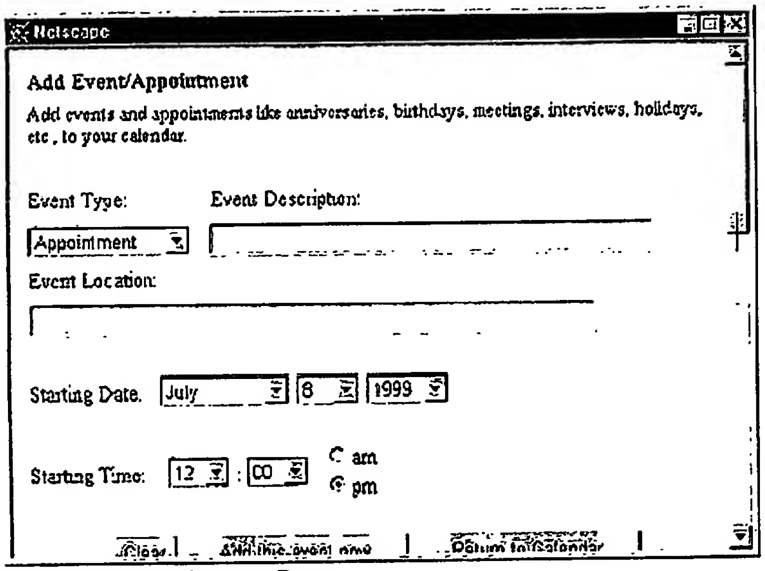
Clicking on the Full-Size link causes the existing calendar (from MO), to launch in a browser window above the bar for a more extensive view of events.



Full Size (existing) Calendar.

2.1.2.5 Events:

Clicking on the Events link causes the Scheduled Events list to appear to the right, in the portal area. This list presents the information from the hourly section (blue and white section), of the users' full view calendar (shown above). This section is scrollable and presents controls to ADD, EDIT SELECTED and DELETE SELECTED. If the user clicks on ADD, they will be presented with the ADD EVENT/APPOINTMENT page of the existing calendar. The user selects an item to edit or delete, by highlighting it. Clicking on DELETE SELECTED will automatically delete the record of this event. Clicking on EDIT SELECTED will pop up the EDIT EVENT/APPOINTMENT page of the existing calendar, showing the current information for that particular event. The user makes any necessary changes and resubmits the event by clicking on ADD THIS EVENT NOW.

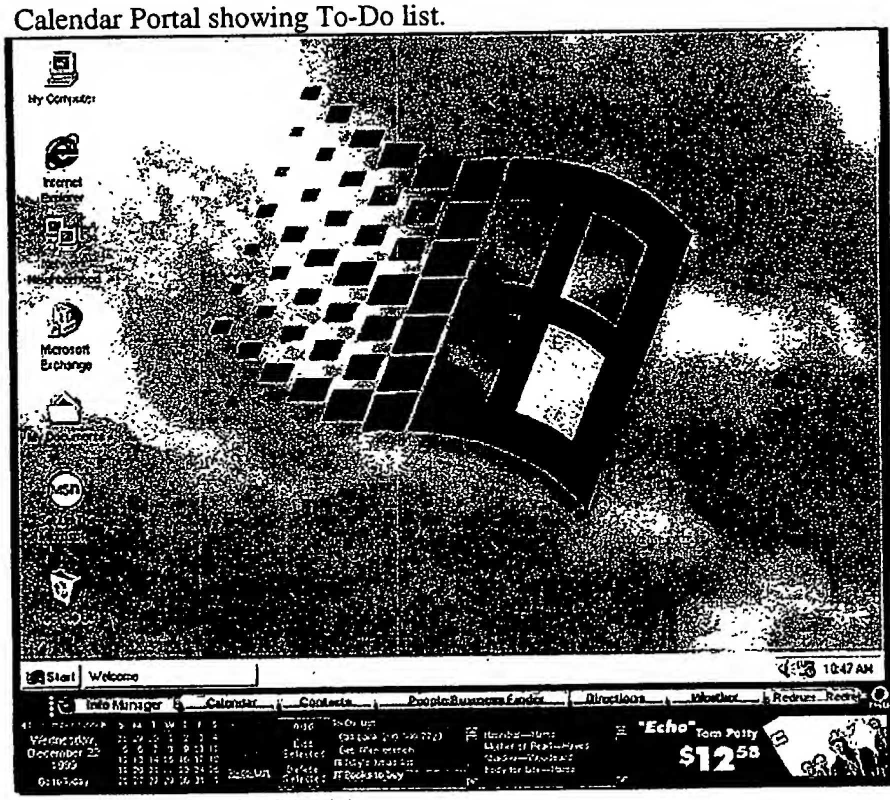


Add Event/Appointment Page.

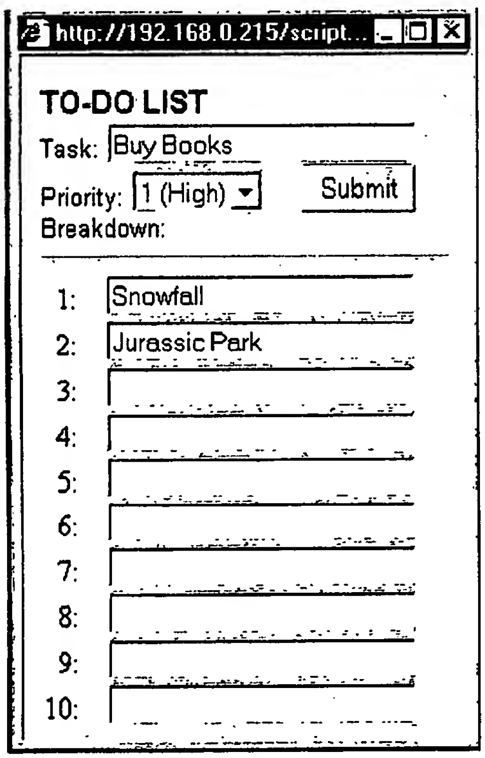
2.1.2.6 To Do List:

Clicking on the To-do List, causes the user's ongoing To-Do list to appear in the portal area in the same space where the Scheduled Events list appears. This section is non-date specific, and can be prioritized. This area is also scrollable and includes the same edit controls as the Scheduled Events list: ADD, EDIT SELECTED AND DELETE SELECTED.

Calendar Portal showing To-Do list.



To DELETE an item on the To Do list, the user will first need to select it by highlighting it. Clicking on EDIT SELECTED or ADD presents the EDIT or ADD TO, TO-DO LIST pop up dialogue box. The user adds information or makes changes and clicks on SUBMIT.



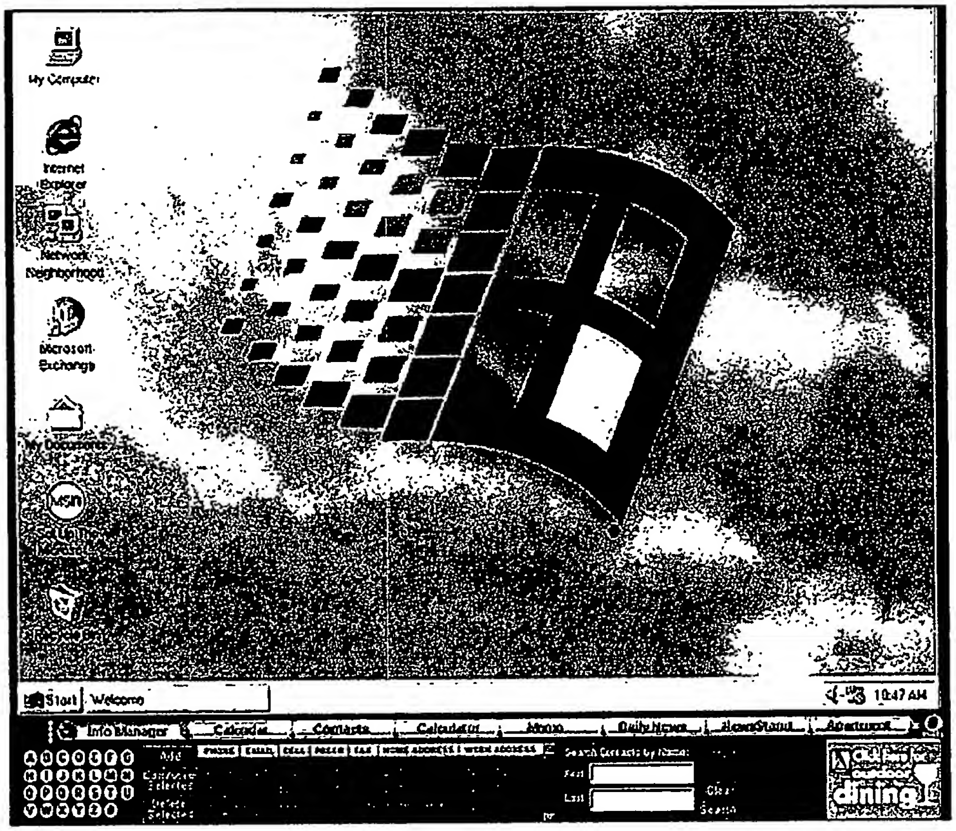
Add/Edit To-Do List interface

2.1.2.7 Small Ad Space:

To the right of the To-Do list is a variable-sized banner ad space. This banner ad space is present for all the portals for the PIM, but may vary in size due to the size of the content windows. Size of the presented ad is dependent on the resolution of the end users screen.

2.1.3 Contacts Button:

The next button on the bar to the right of the Calendar button is the Contacts button. When the user clicks on this button it will launch their address book in the portal area. They will see the following features, from left to right, in the portal area below the bar:



Contacts Portal

2.1.3.1 An alphabetical keypad for selecting listings:

The user clicks on a letter or the # sign to see listings for people whose last name begins with the selected letter or a number. These names are displayed in the scrollable box to the right of the alphabetical listing.

2.1.3.2 ADD, EDIT SELECTED and DELETE SELECTED Buttons:

To add a name, the user clicks ADD. This presents the current calendar's ADD/CHANGE form. They then fill in the information and click on SUBMIT ENTRY CHANGES. To EDIT an entry, the user selects a listing in the box to the right and then clicks on EDIT SELECTED. This brings up the Add/Change form for that listing. To DELETE a listing, the user selects the listing and then clicks on DELETE SELECTED.

The user can see the following information, per listing:
Name; home phone number; work phone number; email address; cell phone number; pager; fax and home and work addresses.

2.1.3.3 Search by Name

The next window presents the Search by Name feature. This is part of the functionality of the existing calendar. The user types in a first or last name and clicks on search to search their directory of contacts. The results appear in the scrollable listing area to the left.

2.1.3.4 Contacts Help

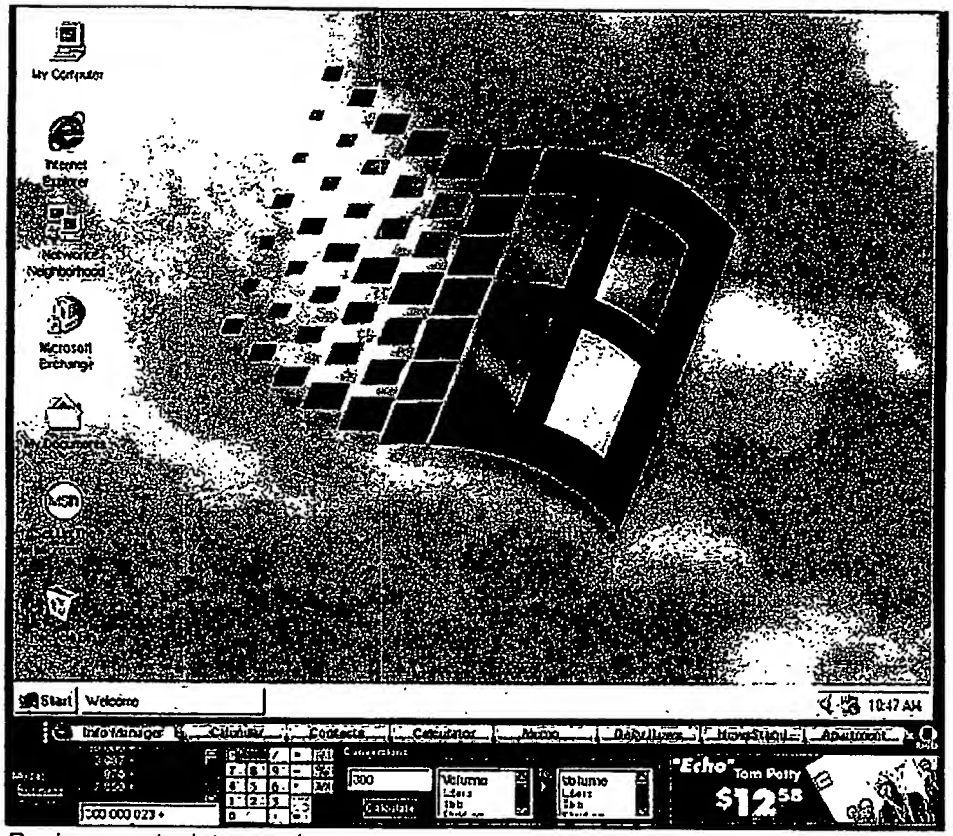
Links to the Help for the Address book. **(*This will need to be modified for this version of Address Book/Calendar.)**

2.1.3.5 Clear

Clicking on this button clears the current search.

2.1.4 Calculator Button:

The next button to the right of Contacts is the Calculator button. There are two display modes for the calculator: Business and Scientific. The user may toggle between the two modes, using the two links on the left side of the portal.



Business calculator mode.

2.1.4.1 *Business calculator mode*

The Business calculator mode lists the entered numbers in a column in the display area on the left side of the screen and keeps a simple running tally, shown in red on the display area.

2.1.4.2 Onscreen Keypad

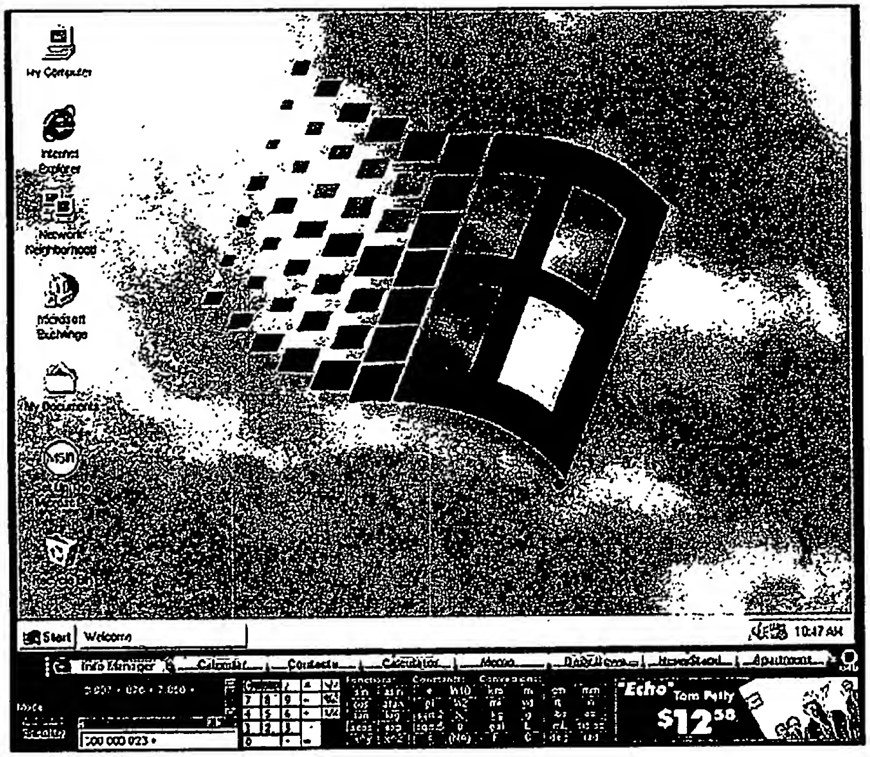
To the right of the display area is an onscreen representation of a traditional keypad. The user can enter numbers and functions here by clicking on buttons on the onscreen keypad or by using their actual keyboard.

2.1.4.3 Conversion section

The user may enter a number in the window in the conversion area and then select the unit of measurement that they are converting from, and the unit of measurement that they are converting to. They then click on the Calculate button and the answer will appear in the white window in the conversion area.

2.1.4.4 Scientific calculator mode

The Scientific calculator mode displays actual calculations in a scrollable list. Multiple functions can be shown in the display area, and be revisited by scrolling through the display area.



2.1.4.5 Onscreen Keypad:

To the right of the display is an onscreen representation of a traditional keypad. The user can enter numbers and functions here by clicking on a number or function on the onscreen keypad or by using their actual keyboard.

2.1.4.6 Additional Functions, Constants and Conversions:

The next section to the right contains the most used Functions, Constants and Conversions for scientific calculations. The user selects a number in the white sum display area on the left and performs a function on it by selecting from Functions, Constants or Conversions.

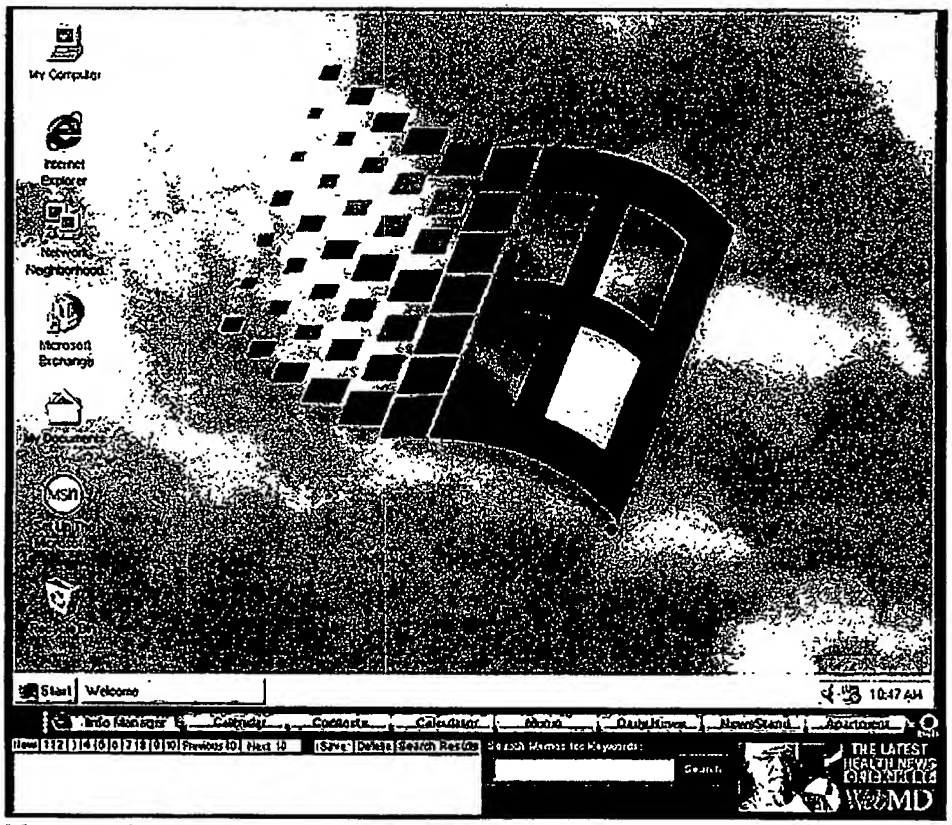
2.1.4.6.1 **Functions** work the same way that they do for the Business Calculator.

2.1.4.6.2 **Constants** can be applied to calculations or can be selected and presented by themselves. Clicking on a constant alone, will present the constant in the white display area.

2.1.4.6.3 **Conversions** work by first selecting a number and a unit of measurement and then by selecting the unit of measurement you want to convert to. The conversion then appears in the display area.

2.1.5 Memo:

The fourth button on the PIM bar launches the Memo feature in the portal area. This is a tool the user can use to write short notes about any topic. It could be a list of gifts to buy, a book they heard about, design ideas, a phone number they need to jot down, etc. The Memo portal from left to right includes the following:



Memo portal

2.1.5.1 Memo Input/Retrieval area:

Each memo has a number (like a page number) associated with it, for a total of 50. The numbers appear across the top of the input area beginning with New. The user can select a number from the list across the top of the Input/Retrieval area to see a specific memo, by choosing from the numbers that appear or by clicking on Previous 10 or Next 10. When the user first goes to the memo portal, a new (blank) memo appears.
The white area is the space where the user enters their memo content.

2.1.5.2 Save/Delete:

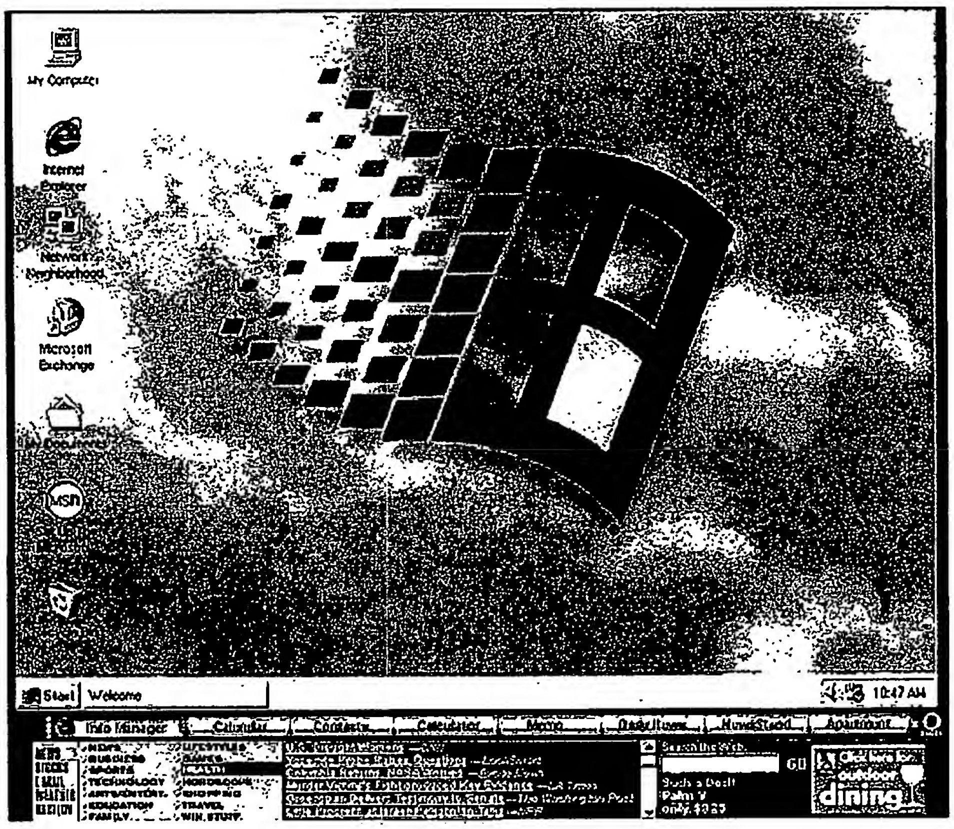
After a user types a memo in the Input area, they must click on Save to save the memo. Users can Delete a memo by selecting a specific memo and clicking on the Delete button.

2.1.5.3 Search Area:

A user can also retrieve a memo using the Search area. They simply type a word they remember using in the memo, into the Search box and click on the Search button. The result of the Search appears in the white area. They use the Search Results button to page through various pages of results.

2.1.6 Daily News:

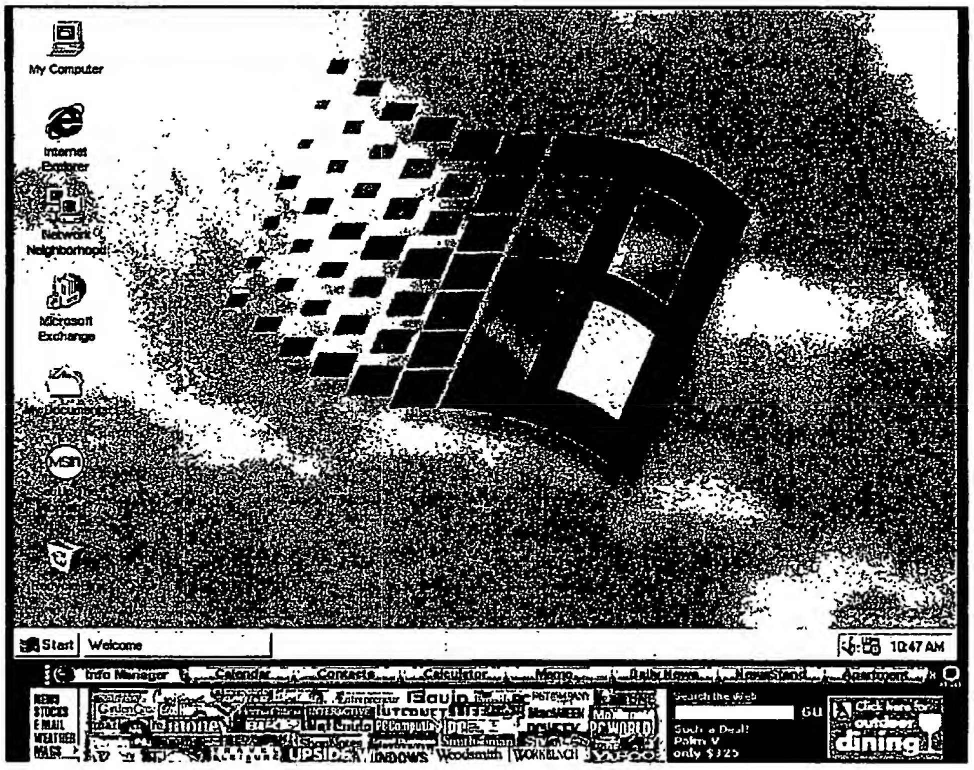
The fifth button on the bar is Daily News. Clicking on this button presents the headlines from the current MySpace Online Daily News to appear in the portal area. We already have this functionality working for the generic beta so all that may be required here is a slight design change to make this feature appear consistent with the rest of the PIM portals. The Daily News portal will contain a menu listing each of the major sections of the Daily, such as News, Sports, Weather, etc. (Please disregard the beige menu on the far left. This will not be included.)



Daily News Portal

2.1.7 NewsStand:

The sixth button on the PIM side is the NewsStand button. Clicking on this button presents a graphic of the current MySpace Online newsstand (also called magazine rack) in the portal area. Each magazine links directly to that publication's online ezine or publication.



Newsstand portal

2.1.8 Import/Export:

The last button on the bar, on the far right is Import/Export (not Apartment as shown in most of the bitmaps). Clicking on the Import/Export button on the bar will launch an Import/Export interface in the portal area. The Import/Export feature lets you enter (Import) scheduling, address and memo information that the user may already have in another program into the xSides PIM, without re-entering information one entry at a time. It also lets you take (Export) the same type of information out of the PIM as a text file that you can save on your computer, print out, or enter into another device or program. The user will choose which action they would like: import or export and will select which PIM item they wish to Export or Import and which file formats they would like to use. Initially at least, this feature will import or export tab delimited, or comma

delimited text files and xml file formats only. The user would have the option to Import/Export information for/from the calendar, contacts, memo, and to-do list

2.1.8.1 Functionality:

Importing:
A user's file is imported to our server, where it is parsed and put into the PIM database. We will use an ISAPI dll to grab the file off of the client machine and upload it using the upload code that has been written for the Communications layer for xSides/AllSides. Since there is not a one to one field correspondence from the PIM to other applications that may be used for importing/exporting, for example, Outlook, the user may have to manipulate the data to make it appear in the correct text format

2.1.8.1.1 To Import: Importing into the PIM takes two steps: the user must export information from their original program or device and then import it into the PIM.

2.1.8.1.2 Preparing a file to be imported into the PIM: To prepare a file to be imported into the PIM, the user must export it from their original program or device and save it as a text file, using the file extension .txt. As part of exporting, the user will need to select the characters to be used in between fields: comma, semicolon or tab.

2.1.8.1.3 The user may have the option to export field names on the first line. This is entirely optional but will make it easier to identify fields when importing. If they chose this option during Export, they must put a check next to "Does this include titles?" on the Import portal on the PIM.

2.1.8.1.4 Importing into the PIM: In the "Import" box, under "File Name:" on the Import (lefthand) side of the portal, the user enters the name of the file they would like to import into the Calendar, Address Book, Memo, or To-Do List. If they don't know the file name, they can click the "Browse" button to search for it.

2.1.8.1.5 Under "File Destination:" they indicate where they want the information imported to by selecting the button next to the destination.

2.1.8.1.6 Under "File Type:" they indicate the type of the file by selecting the button next to the method used in their file to separate the fields of information. They can open their file in Notepad and see which punctuation is used (or if the file is in XML) to separate the fields.

2.1.8.1.7 Click "Next." They will see their information displayed in separate fields. Use the drop-down boxes above the fields to choose the appropriate label for each field; e.g., if the information contained in the first field is start dates of events, select "Start Date" from the drop-down menu. Choose the correct label for each field of information or choose the Ignore label.

2.1.8.1.8 Click "Show Me" to see the results of labeling in the box below. Check the information to make sure all the fields have the appropriate label. If not. go ahead and make additional changes to the information in the drop-down boxes. Click "Cancel" to cancel you import. Click "Submit" if all information and labels look correct and your data will be imported.

2.1.8.1.9 To Export: In the "Export" box, under "File Type:" select the type of file you'd like to export. Check the "Include Titles?" box if you'd like to export the titles of the information fields in your file.

2.1.8.1.10 Under "Export Type:" indicate the type of punctuation to use to separate the fields of information (or choose XML) by selecting the appropriate button. To import this data to another scheduling system, choose the same punctuation (or XML) that that program requires.

2.1.8.1.11 Click "Go" and a dialog will pop up asking where on your computer you would like to export (save) the file to. Choose a location and the file will be saved in that location.

2.2 Future Possible Features:

If the Daily News is spun off as its own individual face of the PIM bar, this button could be replaced with an Expense Report Button or a Net-based Word Processor button.

2.2.1 Expense Report/Checkbook Register:

The PIM could include an Expense Report button. Clicking on this button would cause a simple form that we create, to pop up either in the portal area, if there's room, or full screen, above the bar. Our form would export to the leading templates for expense reports such as Excel. We could try to work with Quicken and MS Money as well.

2.2.2 Print Feature:

We would also like to include the ability to print any type of PIM information. We may call for a Print button on the bar, which would function the same way as Import/Export in that clicking on this button would launch an interface that would allow the user to choose what they want to print. Or there may be a print button added to all of the relevant portal/pages.

2.2.3 Email:

We could add an Email button to the PIM bar. When the user selected Email, we could present the users'pop 3 email inbox or Exchange inbox. If the user didn't have email, this button would be dead (not ideal). When the user initially clicked on this button, a small interface would pop up asking them to identify their existing email service.

3 Technical Analysis

3.1 Class Analysis of Features/Requirements

3.1.1 Client Side

3.1.1.1 Processes

CALENDAR: While all of the information storage and retrieval are done on the server side of the application, all presentation and formatting of the data is handled on the client side. This method reduces the traffic across the network, eliminating net traffic slow downs. Entire blocks of data are retrieved at once, allowing the client-side engine to deliver a variety of pages from a single download. The full-sized calendar and the portal calendar are actually two separate applications that draw from and write to the same server data source.

All of the GUI presentation is handled client-side, including the calendar-view itself. When the users enters the calendar, it retrieves the current local date and formats itself correctly. This engine is set up to handle dates until the year 2010, but can easily be extended as needed.

TO-DO LIST: Although this appears on the same side as the calendar, it is actually treated as a separate application. The To-do List uses a similar server-client set up that calendar uses, but because the To-do List has a more limited storage capacity, a users entire data set is retrieved at once. This allows the application to limit the net traffic, connecting to the server only when changes to the stored data are requested.

ADDRESS BOOK/CONTACTS: Once again, this application uses a similar breakdown of server to client workload. The client handles all the data formatting and presentation, while the server only handles data storage and retrieval. All the data is retrieved in blocks according to the user request. For example, if a user clicks on the letter A, all entries that match the query are return and shown to the user. A search feature in this application can request modified data sets based on names or letter combination in the record set.

CALCULATOR: The client-side engine handles all processes for this application. The engine parses the user request based on what buttons are presses, then presents the resulting data to the user through simple html modification. Specialized calculations are handled by individual functions, tailored to match needed data input and returned.

MEMO: Similar to the To-do List in its data structure and server-client workload breakdown. The Memo application does require the specialized formatting that the To-do List does, so much of the client-side presentation is WYSWIG, displaying the data exactly as it gets stored in the database.

NEWSSTAND: This is an html page, modified to fit the needs of the portal and PIM.

DAILY NEWS: Current headlines from leading news sources are presented, on a daily basis, across 14 categories, including Top News, Entertainment, Technology, Business, Sports, and Lifestyles. Clicking on the headline text will make the report or feature available for viewing.

3.1.1.2 Diagrams

3.1.2 Server Side

3.1.2.1 Processes

EXPORT: After the user clicks on the export button on the PIM and chooses one of our apps.(calendar/addressbook/memo/Todo list) to export, a text file will be available to them to save on their machine. To do this, an asp page(s) needs to have access to all 4 tables though stored procedures. The .asp page then writes the database data for that user to the client browser. The header to this html page should be set as a text file so that the user will get a dialog asking where to save the page.

USER DEFINED VARIBLES: In all cases the user will be passing the userID (GUID), a number indicating which application from which to export, and a formatting code indicating how to display the data.

The GUID needs to be first converted to base64 and there is an existing VBScript function to do this. The formatting will be used to indicate whether the data is to be displayed with spaces or commas between fields or in xtml.

For the Calendar, the user needs to pass a beginning and end date indicating the period of events they want returned. For the Addressbook a alphabetical character is passed or a not alphabetical Character indicating they want all their entries.

CODE DESIGN: This could be implemented in 2 .asp pages. The backend page contains the functions that call the stored procedures. Also it needs to contain the GUID conversion code that converts the GUID into a base64 for number. This is stored as a base64 number to save on space in the database. The main page would use 'if' statements to call the unique code appropriate for each application including writing out the data to the page. The logic for the main page is to get all the variables, convert the GUID, go to the appropriate section based on the application number. Then in that section call the function that runs a stored procedure. Each stored procedure will return a recordset. Then Loop through the recordset and display the data based on the format code using the 'response.write' method (See Below) for XML. E.G. if the comma code is passed in then display commas between fields. All display data should include the titles. Titles will be displayed first and this can be done in the same stored procedure

The format for displaying the return data will be different for each application. The Calendar will display user defined data, i.e. start date, end date, type of event, description, location, and notes. The address book will display alphabetically the first, mid, last names, street, city, zip code, work phone, home phone, fax, cellphone, and email. The ToDo list will display the item and then its subitems if any possibly indented to indicate these are subitems and then the priority number. The memo will display a sequential number and then the memo data. These can be displayed
Chronologically because they are in the database with a timestamp and the stored procedure for the memo table can return the recordset as 'ORDER BY timestamp ASC'.

The returned page should set the header to 'Text'. This will allow a dialog box to show that will Permit the user to save the page wherever they wish on their drives.

XTML OUTPUT: As one of the output formats, it will look like this for the calendar:
<CALENDAR>
<TITLE EventType = Event Type StartDate=Start Date EndDate = End Date Description = Description, Location = Location Notes = Notes> </TITLE>

<EVENT EventType = Type StartDate=StartDate EndDate = EndDate Description = Description. Location = Location Notes = Notes></EVENT>
</CALENDAR>
<ADDBOOK>
<TITLE Last=Last Name Mid= Initial FIRST = First Name CITY=city STREET = Street STATE=State ZIP=Zip BIRTH = Birthday EMAIL = Email PHONE=Home WORK= Work Phone CELL= Cell Phone PAGE=Page FAX = Fax COMPANY= Company COStreet=Company Street SUITE=Suite COCITY= Company City COSTATE= Company State COZIP = Company Zip></TITLE>
<ADDRESS Last=Last Mid= Mid FIRST = First CITY=city STREET = Street STATE=State ZIP=Zip BIRTH = birthday EMAIL = Email PHONE=phone WORK= workphone CELL= cellphone PAGE=page FAX = fax COMPANY= company COStreet=costreet SUITE=suite COCITY= Cocity COSTATE= Costate COZIP = Cozip>
</ADDRESS>
</ADDBOOK>
<TODO>
<TITLE DESC=Task PRIOR= Priority></TITLE>
<TASK DESC= eventtitle PROIR= Prior></TASK>
<SUBTITLE DESC=SubTask SUBPRIOR= priority><SUBTITLE>
<SUBTASK DESC= eventtitle PROIR= Prior></SUBTASK>
</TODO>
<MEMO>
<MEMOTITLE TITLE=Title></MEMOTITLE>
<MEMOTITLE=Data></MEMOTITLE>

Comma Deliminated format.
For the Calendar

PIM CALENDAR

Event Type, Event Description, Event Start Date, Event, End Date, Event Location, Event Notes
Meeting,Weekly update, 10/1/1999 8:00:00am,10/1/1999 10:00:00am,atWork, Bring handout

PIM ADDRESS BOOK

Last Name,Initial,First Name, Street,City,State,Zip,Birthday,Home Phone,Work Phone, CellPhone,Fax,Company,Suite,Company Street,City, State, Zip

Pleat,,W, Geoffrey, Seattle,Wa,98125, 5/10/1957, 2065551212,2063361625,2065551212,,xsides 821 Second Ave..Suite 1600,Seattle, Wa, 98102

PIM TODO
Task, Priority
Mow grass, 5

PIM MEMO
Memo Data
Call IRS at 8005551212

For Space Deliminated leave the commas out.

4 Marketing

4.1 Product Distribution:

4.1.1 AllSides Download Site:

The PIM side will be featured on the AllSides download site, both on the home page and on an individual description page on the AllSides site. Users will be warned that they must have xSides 2.2 with merge capability in order to merge the PIM into their xSides bar.

4.1.2 AllSides Download Interface as part of xSides version 2.2

The PIM side will be listed as one of the available sides on the AllSides Download interface, which is part of the Quick Start Help/preferences pop up. (See AllSides spec.) User can choose to download and merge the PIM using this simple interface.

4.1.3 Product Promotion:

The PIM will also be promoted in our press releases and may also be promoted in our tradeout ads.